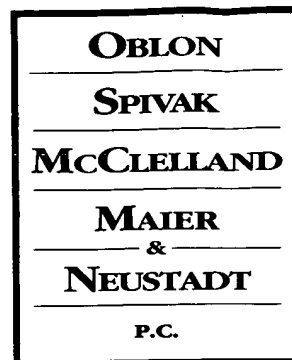


"RESPONSE UNDER 37 CFR 1.116-  
EXPEDITED PROCEDURE EXAMINING  
GROUP 3752"

Docket No.: 201081US3

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313



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RE: Application Serial No.: 09/750,664  
Applicants: Hiroshi FUKUMOTO, et al.  
Filing Date: January 2, 2001  
For: LIQUID SPRAYER  
Group Art Unit: 3752  
Examiner: KIM, C.

SIR:

Attached hereto for filing are the following papers:

**REQUEST FOR RECONSIDERATION (After Final)**

Our check in the amount of \$0.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

A handwritten signature in dark ink, appearing to read "G. Maier", is written over a horizontal line.

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201081US3

"RESPONSE UNDER 37 CFR 1.116-  
EXPEDITED PROCEDURE EXAMINING  
GROUP 3752"

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF: :  
Hiroshi FUKUMOTO, et al. : EXAMINER: KIM, C.  
SERIAL NO.: 09/750,664 :  
FILED: January 2, 2001 : GROUP ART UNIT: 3752  
FOR: LIQUID SPRAYER :

*Reg  
Reconsideration  
#111  
5/7/03  
Officer*

REQUEST FOR RECONSIDERATION

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

In response to the Official Action dated March 4, 2003, favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-11, and 17-18 are presently active in this case. The Applicants note that Claim 1 is generic to all of the pending claims.

The Official Action indicated that only Claims 1-3, 17, and 18 are pending in the present application. However, Claims 4-11 have not been canceled from the application, and therefore remain pending.

In the outstanding Official Action, Claims 1-3 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The specific grounds for rejection are repeated on page 3 of the Official Action.

In response to the questions regarding the phrase "a field applier forming an equipotential surface" in line 4 of the Claim 1, the Applicants note that the equipotential

surface is not in reference to the conductive nozzle plate or the liquid holder. The Applicants submits that the equipotential surface is formed by the field applier in the electric field, an embodiment of which is depicted in Figure 1 as an equipotential surface of the equipotential surface group (51).

In the response presented on page 3 of the Official Action, the Official Action asserts that Claim 1 includes a “double inclusion” of a liquid holder. The Applicants submit that Claim 1 is definite under 35 U.S.C. 112, second paragraph. As stated in MPEP 2173.05(o), “[t]here is no *per se* rule that ‘double inclusion’ is improper in a claim.” (Citing *In re Kelly*, 305 F.2d 909, 916, 134 USPQ 397, 402 (CCPA 1962).) The court in *In re Kelly* stated that “[t]he governing consideration is not *double inclusion*, but rather is what is a reasonable construction of the language of the claims.” (Emphasis in the original.)

The Applicants submit that the scope of Claim 1 is clear. Namely, since Claim 1 is not limited to a configuration in which the liquid holder is part of the filed applier, then Claim 1 encompasses both a liquid sprayer in which a portion of the liquid holder is also a part of the field applier, as well as a liquid sprayer in which the liquid holder and the field applier are distinct structures. Such an interpretation is clear from the language of Claim 1. The Applicants submit that the fact that an element serves as both a part of a liquid holder and a part of a field applier does not render the claim indefinite. Newly added Claims 21 and 22 clearly define such configurations. Additionally, the fact that the claim also encompasses additional configurations that one of skill in the art would easily recognize based on the disclose in the specification, does not render the claim indefinite. (See 2173.04 - Breadth Is Not Indefiniteness.) (Note that the Applicants need not disclose every possible permutation of the invention, as such a requirement would be unduly burdensome. The enablement

requirement is whether one skilled in the art could make or use the invention from the disclosures in the application without undue or unreasonable experimentation, which is clearly satisfied in the present case. (See MPEP 2164.01.)) Regarding the assertion that Claim 1 reads on a non-elected species, the Applicants note that Claim 1 remains generic to the elected species.

The Official Action seems to suggest that Claim 1 should be amended either define a liquid sprayer in which a portion of the liquid holder is also a part of the field applier, or a liquid sprayer in which the liquid holder and the field applier are distinct structures, but not both. The Applicants submit that requirement is unnecessary for the clear understanding of Claim 1 and is unwarranted and unduly limiting. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the indefiniteness rejection of Claim 1.

With regard to the indefiniteness rejection of Claim 2, the Applicants note that Claim 2 specifically states that the liquid holder comprises a conductive nozzle plate. Accordingly, there is no “double inclusion” of a liquid holder in Claim 2, but rather the conductive nozzle plate is recited as an element of the liquid holder. Therefore, the Applicants respectfully request the withdrawal of the indefiniteness rejection of Claim 2.

With regard to the indefiniteness rejection of Claim 3, the Applicants note that the equipotential surface is not in reference to any part of the conductive nozzle plate. The Applicants submits that the equipotential surface is formed by the field applier in the electric field, an embodiment of which is depicted in Figure 1 as an equipotential surface of the equipotential surface group (51). Accordingly, Claim 3 does not include a “double inclusion.” Therefore, the Applicants respectfully request the withdrawal of the indefiniteness rejection of Claim 3.

Claims 1-3 were rejected under 35 U.S.C. 102(b) as being anticipated by Hochberg, deceased et al. (U.S. Patent No. 4,046,074). For the reasons discussed below, the Applicants traverse the anticipatory rejection.

Claim 1 of the present application recites a liquid sprayer comprising a liquid holder exposing a liquid surface of conductive liquid sprayed on an object; and a field applier forming an equipotential surface convexed with respect to the liquid surface of a conductive liquid sprayed on an object. The Applicants submit that the cited reference does not disclose a field applier forming an equipotential surface convexed with respect to the liquid surface, as recited in Claim 1.

The Hochberg et al. reference describes a non-impact printing system for making in-situ an energy sensitive surface on a passive support medium from at least two materials which in combination render the surface energy sensitive. The Official Action cites printing head (30) for the teaching of the liquid holder of the present invention, and conductors (40) and common electrode (42) for the teaching of the field applier. The printing head (30) includes a series of orifices (44).

The Applicants submit that the conductors (40) and the common electrode (42) of the Hochberg et al. reference are not disclosed as being capable of forming an equipotential surface convexed with respect to a liquid surface exposed by the printing head (30). For purposes of illustration and not limitation, the present application describes an embodiment in Figure 1 in which a field applier is provided that forms an equipotential surface (one surface of the equipotential surface group(51)) that has a convex shape with respect or in relation to a liquid surface (21a) of a conductive liquid (21) sprayed on the object. The Official Action refers to Figure 2A of the Hochberg reference as showing a concave liquid

surface, however, the only concave surface shown in Figure 2A is a concave surface of the printing head (30). Figure 2A does not depict the surface of the conductive liquid sprayed, which may or may not parallel the surface of the printing head. Additionally, the contour of the equipotential surface lines are unclear in the invention described in the Hochberg reference, and therefore it is unclear whether an equipotential surface in the Hochberg reference is convexed with respect to a liquid surface of conductive liquid sprayed.

Accordingly, the Applicants submit that the Hochberg et al. reference does not anticipate Claim 1 of the present application, which expressly recites a field applier forming an equipotential surface convexed with respect to the liquid surface. The Applicants request further consideration of this limitation in light of the discussion with regard to indefiniteness rejections set forth above.

Claims 2 and 3 are considered allowable for the reasons advanced for Claim 1 from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed, taught, nor suggested by the applied references when those features are considered within the context of Claim 1.


Accordingly, the Applicants respectfully request the withdrawal of the anticipation rejection.

Claims 4-11, 17, and 18 are considered allowable for the reasons advanced for Claim 1 from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed, taught, nor suggested by the applied references when those features are considered within the context of Claim 1.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

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